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L Number	Hits	Search Text	DB	Time stamp
1	166	animation with photographs	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/07/08 12:59
2	28	(animation with photographs) and template	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/07/08 12:59



**US-PAT-NO:** **6728399**

**DOCUMENT-IDENTIFIER:** **US 6728399 B1**

**TITLE:** **Method and apparatus for defining color borders in a raster image by identifying and breaking contrast ties**

----- KWIC -----

**Brief Summary Text - BSTX (4):**

**Image processing generally refers to the manipulation of pictorial data using computers. Computer Aided Design (CAD) is one example of how computers are used to draft complex engineering drawings such as mechanical, architectural or electrical drawings. Other examples of image processing include the manipulation of still photographs or cinema to achieve various effects such as feature enhancement, three-dimensional rendering, or animation. However, the term "image processing" is not limited to pictures—it generally refers to the digitization and computer processing of any analog signal that represents something physical and perceptible in the world. An audio signal can be digitized and processed with computers to perform manipulations such as noise reduction or voice recognition; modulated electrical signals, such as**

provides information with the prior patent is to perform steps of identifying and breaking contrast ties in a two-dimensional raster image. This operation will be magnifying the image, pixel by pixel, caused by enlarging the pixels as shown in FIG. 1. It is intended to preferentially identify and break the contrast ties in the image by increasing the grayscale at points 20 in the base rendering. However, only reduces the grayscale difference point that. Furthermore, increasing the image is not preferred in many applications. One such as *compression* using JPEG format, it may not provide when the image is enlarged.

cause is to convert the same image into a form known as vector. A vector is a mathematical representation of the image which is not concerned with the pixels of the image. For instance, it has a much more compact representation due to the mathematical representation of the example of a vector is a line beginning at X-Y point in a certain place and ending at Y point in this place. In fact, however, images are a series of linear vectors has been developed to do this. The most common is called a polygonal representation, which is a collection of points connected by straight lines. For example, a single color picture can be represented by a vectorial format. Such vector is examined for when converting the image. These vectors will now have pixel is added for the successive vertices represented. By doing so, the original image is represented by a series of points which represent a single vector. The problem with this approach is that the original image appears fragmented due to when the individual vertices are combined.

There are attempts to convert a raster image to a vector format, such as the well-known technique of representing the image as a series of mathematical equations. For example, a portion of the image might be represented using a mathematical model of the image. Such a model is called a surface function. This function is only a mathematical function that applies to individual surfaces from a complete image. A surface with some surface, a method where is represented using a theory of different shapes across the various elements of an image. Similar to the previous method, the original image will therefore be converted to individual shapes which are combining to form the individual shapes which are combining due to the function.

Another known method for raster to vector conversion, referred to as the *Boundary Curve Method*, draws Bezier curves through segments that are placed sequentially adjacent to the image. While simple or versatile, Bezier boundary curve method produces distorted pictures without accurate description. On the other hand, the Bezier surface represents surfaces that have a large number of pixels which reduces the amount of fragmentation resulting associated with other techniques.

The Bezier method is illustrated in FIG. 1. The first step is to identify the color borders for each channel in the image, and then to place Bezier curves directly along the borders.

				KWIC
60	<b>US 6728784 B1</b>			
61	<b>US 6728660 B2</b>			
62	<b>US 6728399 B1</b>			
63	<b>US 6717584 B2</b>			

representing multiple colors, each pixel is represented using each of the pixels are also on one of 256 different colors. The process of decomposing a raster image into a bit-map image is referred to as "vectorizing" the image.

These conventional well-known problems with raster images that limit or reduce the 3D potential of computer visualization. The reason of concern is mainly to store a large amount of memory and color. However, the amount of colors can be increased, and the problem is exacerbated. While attempting to calculate a series of three objects such as a scene in a movie. Not only do 3D images require large amounts of storage memory, but processing such a large amount of data can be slow, particularly when attempting to process scenes involving over 1 billion pixels in the instant.

processes changing to variables, the individual shapes which are combining due to the function.

Another known method for raster to vector conversion, referred to as the *Boundary Curve Method*, draws Bezier curves through segments that are placed sequentially adjacent to the image. While simple or versatile, Bezier boundary curve method produces distorted pictures without accurate description. On the other hand, the Bezier surface represents surfaces that have a large number of pixels which reduces the amount of fragmentation resulting associated with other techniques.

The Bezier method is illustrated in FIG. 1. The first step is to identify the color borders for each channel in the image, and then to place Bezier curves directly along the borders.

**Summary of Invention Paragraph - BSTX (12):**

[0013] The present invention is directed to an effective, compact, integrated and interactive orthodontic treatment planning system. The necessary tools to allow the orthodontist to quickly and efficiently develop a treatment plan for a patient. The present invention also provides a treatment planning system in which the orthodontist-derived treatment can be translated into a design of the treatment. The embodiment integrates 2D and 3D images to drive effective treatment planning. Intelligence is built into the system whereby predefined therapeutic strategies, such as extraction, interproximal reduction, distal movement of molars, can have associated value sets predefined by the clinician used to drive the appropriate set-up automatically. Such predefined therapeutic strategies could be entered via convenient user interfaces such as by templates.

**Summary of Invention Paragraph - BSTX (27):**

[0027] In yet another embodiment of the invention, the unified workstation facilitates rapid selection of treatment plan driven by template. The practitioner provides specific values or ranges of values for the parameters, such as for midline, maxilla and mandible levels and aesthetic occlusal plane, various positions for upper and lower planes, reference tooth, arch form and alignment parameters for space requirements, etc. for patient. The unified workstation, instructions based tools, searches a clinical benchmarking knowledge base.

Details Text Image HTML KWIC

**2 US 20040073446 A1**

**3 US 20040029068 A1**

**4 US 20040015327 A1**

**5 US 20030233547 A1**

US United States

Patent Application Publication (a) Pub. No.: US 2004/0029068 A1  
(b) Pub. Date: Feb. 12, 2004

500 METHOD AND SYSTEM FOR INTEGRATED  
ORTHODONTIC TREATMENT PLANNING  
USING UNIFIED WORKSTATION

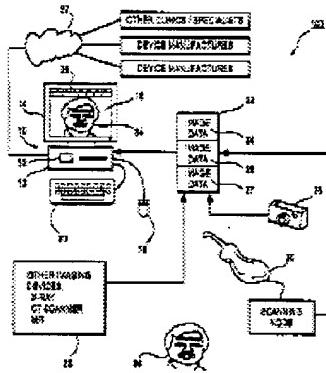
(b) Continuation-in-part of application No. 09/944,412,  
filed on Apr. 13, 2001, now Pat. No. 6,432,351.

Publication Categories

(b) Int. Cl. .... A61C 43/00  
(b) U.S. Cl. .... 435/24

**ABSTRACT**

A method and workstation for orthodontic treatment planning of a patient. The workstation is based on a computer system having a graphical user interface, a processor and a memory storage medium containing displayed results pertaining to a patient including image data (3D image data and 2D image data). The workstation further includes a set of active control tools for manipulating the image data. The workstation also includes a unified workstation, which is a two- or three-dimensional virtual model of the patient, enables a treatment plan in the virtual model, selects a reference point in the virtual model, aligns virtual teeth in the virtual model to a proposed space gained to treat the patient's malocclusion and records the treatment plan in the proposed space. The workstation also includes a set of controls to receive feedback to make any further adjustment to the proposed treatment. When the adjustments are complete, the two sources of treatment a finalized proposed treatment plan for treating the patient.



DOCUMENT-IDENTIFIER: US 20020033834 A1

**TITLE:** Method of and apparatus for secondary application of film image

----- KWIC -----

**Summary of Invention Paragraph - BSTX (3):**

[0002] The celluloid animation has been produced by laminating background image a plurality of transparent sheets called celluloid objects are drawn and taking pictures of photographs frame by continuously on a 35 mm film. Most of classical celluloid animation masterpieces produced in 1950's and 1960's are maintained in

Details Text Image HTML KWIC

53 US 20020059604 A1

54 US 20020057289 A1

55 US 20020033834 A1

56 US 20020010789 A1

(a) United States

(a) Patent Application Publication (a) Pub. No.: US 20020033834 A1  
(a) Pub. Date: Mar. 21, 2002(b) METHOD OF AND APPARATUS FOR  
SECONDARY APPLICATION OF FILM  
IMAGE

(b) U.S. CL. .... 345/45

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(c) ABSTRACT

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(d) Appl. No. 09/794,896

(e) Filing Date: Mar. 3, 2001

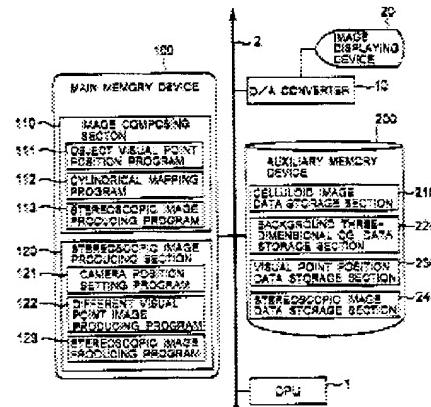
(f) Foreign Application Priority Data

Sep. 18, 2000 (JP) 2000-236147

Publication Classification

(g) Int. Cl. .... G06G 9/10

is a stereoscopic image-producing apparatus comprising an image displaying device, a memory device for storing visual information, and a control unit which controls the image displaying device, wherein the image information stored in the memory device is composed of at least two sets of image data, each set of image data being provided by combining the stage of projecting a stereoscopic picture of an object included in the celluloid image, decomposing picture into two sets of cylindrical model based on the result of the calculation, displaying the celluloid image in its original form, and composing the separated picture with the other stereoscopic CG data.



**DOCUMENT-IDENTIFIER: US 20020063714 A1**

**TITLE: Interactive, multimedia advertising systems and methods**

----- KWIC -----

**Claims Text - CLTX (1):**

**1. A method of creating and displaying an animated image of a first object, comprising the steps of (a) taking in a predetermined sequence a series of individual photographs of the object, including portions any background matter, (b) storing in the memory of a computer as individual digital images said individual photographs, (c) editing the digital images to remove any image of the background matter, (d) installing in the memory of the computer an authoring program for creating scalable, interactive animation of said edited and digital images, said authoring program being adapted to interact with a functional control program and having a storage section for imported digital images, (e) importing into said storage section said edited digital images as individual bitmap images and storing said individual bitmap images in said predetermined sequence within said storage section, thereby enabling the authoring program to display on a screen of a computer monitor said individual bitmap images rapidly one after another to create an animated image of said**



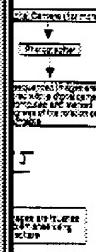
Pub. No.: US 2002/0063714 A1  
Pub. Date: May 30, 2002

Publication Classifications

G06T 13/00  
G06F 17/00

**ABSTRACT**

A method for generating colored images of an object or sequence with a specific motion for display on a computer monitor. The method includes the steps of taking a series of photographs of the object or sequence, and editing those photographs to remove any background matter. These edited images are imported into an authoring program in which (a) the object or sequence is converted into a digital image, (b) the digital image is converted into a bitmap image, (c) the bitmap image is stored in a storage section of the authoring program, and (d) the bitmap image is displayed on a screen of a computer monitor.



US 649,247,6, 6,492,476, 6,492,477, 6,492,478, 6,492,479, 6,492,480, 6,492,481, 6,492,482, 6,492,483, 6,492,484, 6,492,485, 6,492,486, 6,492,487, 6,492,488, 6,492,489, 6,492,490, 6,492,491, 6,492,492, 6,492,493, 6,492,494, 6,492,495, 6,492,496, 6,492,497, 6,492,498, 6,492,499, 6,492,500, 6,492,501, 6,492,502, 6,492,503, 6,492,504, 6,492,505, 6,492,506, 6,492,507, 6,492,508, 6,492,509, 6,492,510, 6,492,511, 6,492,512, 6,492,513, 6,492,514, 6,492,515, 6,492,516, 6,492,517, 6,492,518, 6,492,519, 6,492,520, 6,492,521, 6,492,522, 6,492,523, 6,492,524, 6,492,525, 6,492,526, 6,492,527, 6,492,528, 6,492,529, 6,492,530, 6,492,531, 6,492,532, 6,492,533, 6,492,534, 6,492,535, 6,492,536, 6,492,537, 6,492,538, 6,492,539, 6,492,540, 6,492,541, 6,492,542, 6,492,543, 6,492,544, 6,492,545, 6,492,546, 6,492,547, 6,492,548, 6,492,549, 6,492,550, 6,492,551, 6,492,552, 6,492,553, 6,492,554, 6,492,555, 6,492,556, 6,492,557, 6,492,558, 6,492,559, 6,492,560, 6,492,561, 6,492,562, 6,492,563, 6,492,564, 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**DOCUMENT-IDENTIFIER: US 20030085904 A1**

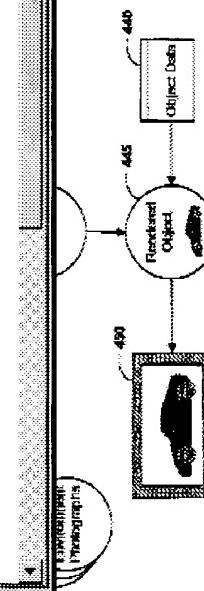
**TITLE:** Method and system for visualizing paint on a computer-generated object

----- KWIC -----

**Detail Description Paragraph - DETX (5):**

[0034] Environment math data may be obtained, as seen in 120. The environment math data may comprise digital information taken from photographs of selected environments. The photographs may be taken of a reflective sphere in the chosen setting. A single photograph may be taken of a reflective sphere or hemisphere for static rendering. Multiple photographs may be taken of the sphere or hemisphere at different angles including different heights to render accurately a 3-D animation. Environment math data may include information on the reflectivity of a paint in a particular environment with attributes that define the reflectivity at any point on the object. A reflection-rating table may be created for each paint with ratings, for example, on how well the contours of the reflections are seen on a surface painted with a given paint, and on how well the color of the reflections may be seen on the painted surface. The information may be received from measurements of an actual

3.4 of 4 US 20030085904 A1



Details Text Image HTML KWIC

27	US 20030128205 A1	
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28	US 20030085932 A1	
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29	US 20030085904 A1	
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30	US 20030053162 A1	
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41		
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**DOCUMENT-IDENTIFIER: US 20030046160 A1****TITLE:** Animated electronic message and method of**----- KWIC -----****Detail Description Paragraph - DETX (12):**

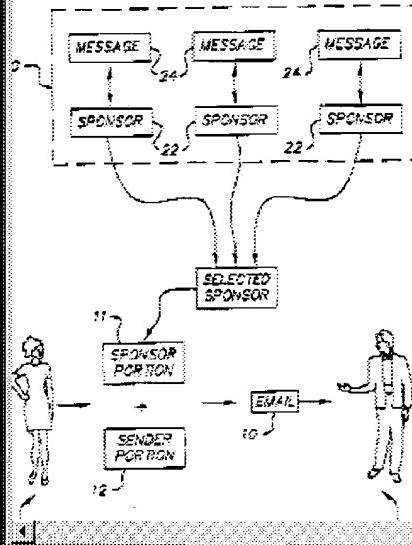
[0037] FIG. 5 provides a more detailed illustration of the first Sender provides a digital still image 30. Digital still image 30 comprises a facial image. An animation model 32 is generated still image 30 using software and methods known to those skilled in the art, as disclosed in "Synthesizing Realistic Facial Expressions from Photographs", by Pighin et al, SIGGRAPH 98, Computer Graphics Annual Conference Series, 1998, Pages 75-83. A further method from LifeFX, Inc. which has developed a tool called Facemail for generating animated email messages (refer to "You've Got Face!", Time, April 1998, p. 6, 30). As such, Lifefx utilizes a model of a facial image.

**ELRICN MESSAGE AND  
PRODUCING****Patent Classification**

(51) Int. Cl. G06F 17/60; G06F 15/16  
(52) U.S. Cl. 709/14; 709/204

**(57) ABSTRACT**

A method of producing an animated electronic message in which at least a portion of a fee associated with producing the animated electronic message is paid for by a sponsor. The method comprises the steps of a user accessing a database which includes at least one sponsor message and software for producing the animated electronic message; the user using the software to produce the animated electronic message; the user agreeing to use the sponsor message which will provide a credit for some of the fee for producing the animated electronic message; and attaching the sponsor message and the animated electronic message which is sent to one or more recipients. In a further embodiment, a sponsor coupon is distributed with the sponsor message and the animated message. In a still further embodiment, the sponsor message is animated. In yet a further embodiment, the credit for some of the fee is paid by the sponsor to a service provider or to the user.



		KWIC
29	US 20030085904 A1	
30	US 20030053162 A1	
31	US 20030046160 A1	
32	US 20030046152 A1	
41		

**TITLE:** System and method for automatic layout of images in digital albums

----- KWIC -----

**Detail Description Paragraph - DETX (5):**

[0055] A complete albuming automation system utilizes various algorithms and techniques including advanced event clustering, image appeal and automatic page layout. In an illustrative embodiment of such a system is for a "DAFY" (Do-it-All-For-You) list where the user inputs a collection of images and the system produces (a collection of images) with minimal input from the user. It will be understood by those of ordinary skill in the art, that the term "image" encompasses a much broader scope than the conventional photographic image. The album concept stems from the traditional photographic album, but in the digital world, images include computer generated graphics, bitmaps, photographs, computer altered photographs, video still frames, various forms of artwork, text, background materials, and even animation, and computer generated time variant materials.

	Details	Text	Image	HTML	KWIC
41	US 20020158972 A1				
42	US 20020124004 A1				
43	US 20020122067 A1				
44	US 20020107737 A1				

(21) United States  
(22) Patent Application Publication (23) Pub. No.: US 2002/0122067 A1  
Geigel et al. (24) Pub. Date: Sep. 5, 2002

## (35) SYSTEM AND METHOD FOR AUTOMATIC LAYOUT OF IMAGES IN DIGITAL ALBUMS

## (57) ABSTRACT

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(32) Appl. No.: 09/794,685

(33) Filed: Dec. 15, 2000  
Publication Classification

(51) Int. Cl.: G06F 17/00 (20060101)  
(52) U.S. Cl.: 348/182; 348/183

A system and method for automatic creation of digital image albums. A Digital Camera Model 1000 stores images and a camera selection model 102 provides a camera selection. A group of images in a plurality of other pages 142 are selected based upon a user's input. The selection module 104 identifies images and compares them with user preferences. When an acceptable image layout has been generated, the image page requirements are transferred to an Image Placement Model 106. The Image Placement Model 106 performs a search for a layout that matches the user's requirements. The search is performed using a Genetic Engine 108. The Genetic Engine 108 generates a page layout genetic structure. There structure defines the location, scale, and orientation of images placed on a given page. A layout evaluation module evaluates and compares three layouts with certain other preferences and page requirements. When a suitable layout has been generated, a final album output is generated, which may be displayed, printed, or otherwise transferred for subsequent processing.

